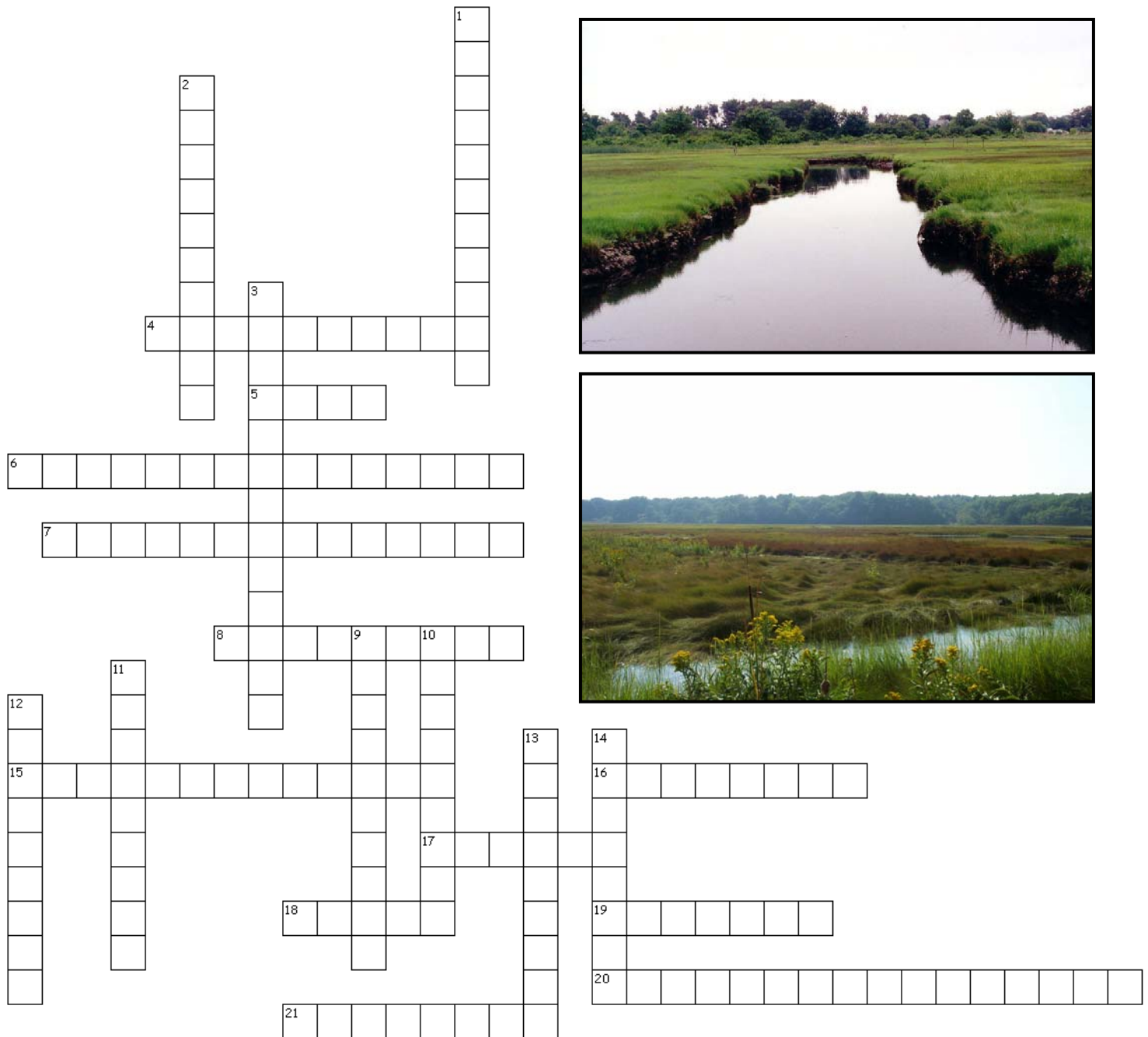


# Salt Marsh Ecology & Monitoring Crossword Puzzle



## Words in this Puzzle:

Estuary, Groundwater, High Marsh, Hydrology, Invasive Species, Low Marsh, Monitoring, Nekton, Parameter, Panne, Plot Sample, Pool, Reference, Refractometer, Rhizomes, Salinity Regime, Salt Marsh, Sample Station, Tidal Restriction, Transect, Upland Edge

### Across:

4. The zone of a salt marsh that is only flooded during extreme high tides or coastal storms, and sustains a variety of upland and wetland plants that are not well adapted to periodic flooding or salt stress.
5. A depression on the surface of a salt marsh generally permanently flooded depressions.
6. Non-indigenous organisms that may threaten the diversity or abundance of native species or natural ecological relationships and functions by spreading and out-competing native species.
7. The measured, normal fluctuations in salinity over tidal and seasonal cycles.
8. The area of a New England salt marsh that is flooded by higher than average tides and dominated by the grasses *Spartina patens* and *Distichlis spicata*. This area lies between the low marsh and the marsh's upland border.
15. A device used to measure salinity (or the concentrations of certain dissolved minerals). Prisms send light through a very small water sample and the bend of the light is consistent with the concentration salts.
16. A horizontal, usually underground stem that generally sprouts roots and shoots from its nodes.
17. Any organisms that actively swim in the water column.
18. A depression on the surface of a salt marsh. This term is used variably in the literature and field to include both vegetated and un-vegetated, as well as permanently or temporarily flooded depressions.
19. Region of interaction between rivers and near-shore ocean waters, where tidal action and river flow mix fresh and salt water. Such areas include bays, mouths of rivers, salt marshes, and lagoons. These brackish water ecosystems shelter and feed marine life, birds, and wildlife.
20. A structure or landform that restricts natural tidal flow, such as a culvert, bridge, dam, or causeway.
21. The seaward area of a salt marsh, generally flooded daily by the tides, and dominated by the tall form of *Spartina alterniflora*.

### Down:

1. The water found beneath the Earth surface, frequently used in reference to aquifers and drinking water wells.
2. A field sample technique that gathers information from an area enclosed within the dimensions set by a frame of a standard size.
3. A specific location within the salt marsh site selected to conduct field sampling.
9. Periodic or continuous survey or sampling to determine the status or condition of various media and systems, including water bodies, groups of plants and animals, or ecological systems.
10. A marsh that exhibits a typical "minimally disturbed" condition, or maximum capacity and represents other marshes in a specific region sharing the same water regime, topographic climate zone.
11. The [study of] water of the earth, its occurrences, distribution, and circulation with particular emphasis on the chemistry and movement of water.
12. A measurable property whose value determines characteristics of an ecosystem (e.g. salinity is a measurable attribute of estuarine waters).
13. Low-lying, vegetated coastal wetlands, influenced by the tidal estuary or marine waters.
14. A method for environmental sample or survey using a straight line to delineate the area of analysis.